

## CLAIMS

1. A linear actuator comprising:
  - a shaft having a male thread portion;
  - a worm gear speed reducer for reducing rotation of a motor in speed and transmitting the rotation to the shaft;
  - a female thread member which is threadedly engaged with the male thread portion and which moves forward and backward by normal or reverse rotation of the shaft;
  - a moving cylinder which is fixed to the female thread member and which moves forward and backward with respect to a housing; and
  - a position detection apparatus which detects a position of the moving cylinder,wherein the position detection apparatus can adjust detection of a position of the moving cylinder in the housing.
2. The linear actuator according to claim 1, wherein the position detection apparatus comprises a potentiometer which converts the rotation amount of the shaft into a voltage value, and the position detection apparatus is movably provided on the housing.

3. The linear actuator according to claim 2, wherein a driven gear is mounted on a sensor shaft of the potentiometer, the driven gear is meshed with a pinion which rotates in unison with the shaft, and the potentiometer can move in an axial direction of the moving cylinder or toward an axis of the moving cylinder.

4. The linear actuator according to claim 3, wherein the potentiometer can slide in the axial direction of the moving cylinder or toward the axis of the moving cylinder.